

Introduction

On 16 July 2012, the Office for National Statistics (ONS) published the first results of the 2011 Census, which included national and local authority population totals and an age/sex breakdown of the population by five-year groups. The figures show that the estimated population of the City & County of Swansea on Census Day (27 March 2011) was **239,000**. These initial Census figures were summarised in a briefing note prepared by the Council's Research and Information Unit in July (at www.swansea.gov.uk/2011census).



The first release (July 2012) also contained a range of additional information and statistics at a local authority level alongside the initial 2011 Census population estimates. This briefing note summarises the most significant elements of this for Swansea, including:

- Census response and return rates
- Internet completion
- Occupied households and household/communal establishment residents
- Non-UK short-term residents (i.e. those outside the 'usual resident' definition)
- Information on the various comparators used by ONS in the quality assurance process and confidence intervals
- The broad components of the process used by ONS to translate the counts (those people completing a questionnaire) into published Census population estimates.

Response and Return Rates

One of ONS' key targets for the 2011 Census was to achieve a 94% response for England and Wales (E&W) overall, and at least 80% in each local authority area. This was achieved – the 'person response rate' for E&W was 94%, with response rates for all local authorities ranging from 81% to 99%. In Wales, this range was lower (92.4% to 94.5%).

The person response rate aims to measure the level of under-enumeration of the usually resident population. ONS defines this rate as '*the number of usual residents for whom individual details were provided on a returned questionnaire divided by the estimated usually resident population*'. For 2011, Swansea had a person response rate of 92.4%, slightly lower than its published 2001 Census rate (93.7%), and marginally the lowest of all 22 local authorities in Wales, just below Cardiff and Newport (92.5%). The highest rates in Wales were recorded in Powys (94.5%) and Monmouthshire (94.2%).

Figures are also available for the 'household response rate' – with Swansea having the 2nd lowest rate in Wales (93.0%) – and 'household return rate' (Swansea rate: 91.3%).

Table 1 below outlines Swansea, Wales and England & Wales figures for Person Response Rate, Household Response Rate and Household Return Rate. Swansea's ranking (within Wales and England & Wales) for each of these rates is also included, together with the highest/lowest rates for local and unitary authorities within Wales and England & Wales.

Table 1: 2011 Census Response and Return Rates

Area	Person Response Rate	Household Resp. Rate	Household Return Rate
Swansea	92.4%	93.0%	91.3%
Rank in Wales	22/22	21/22	15/22
Rank in England & Wales	307/348	316/348	290/348
Wales	93.2%	94.2%	91.7%
(highest: Wales)	Powys: 94.5%	Merthyr Tydfil: 97.8%	Caerphilly: 94.4%
(lowest: Wales)	Swansea: 92.4%	Gwynedd: 92.5%	Gwynedd: 88.1%
England & Wales	93.9%	94.9%	92.7%
(highest: E&W)	West Devon: 97.9%	Oadby & Wigston: 99.6%	Eastleigh: 97.1%
(lowest: E&W)	Kens & Chel: 81.7%	Kens & Chel: 82.3%	Kens & Chel: 79.0%

Source: 2011 Census: Census response and return rates, Office for National Statistics. © Crown Copyright 2012.

Notes and definitions:

- The 'Person Response Rate' is defined as the number of usual residents for whom individual details were provided on a returned questionnaire, divided by the estimated usually resident population.
- The 'Household Response Rate' is calculated as the number of households (containing one or more usual residents) who returned a questionnaire divided by the estimated number of households containing usual residents.
- The 'Household Return Rate' is the percentage of household questionnaires that were returned. This rate was used during the census field operation to manage the allocation of resources for follow-up activities with non-responding households.
- Kens & Chel = Kensington & Chelsea.

Internet Completion

The 2011 Census provided users with the opportunity to complete their census questionnaire on-line for the first time. The internet response rate in Swansea, at 15.0%, is the joint third highest proportion in Wales – behind only Cardiff (18.2%) and Newport (15.9%). In Wales overall, 13.4% of census questionnaires were submitted on-line, with Blaenau Gwent (9.5%) having the lowest internet response rate in England & Wales. Equivalent rates for all regions of England were higher than the Wales average, ranging from 21.9% in London to 13.9% in the North East.

Rates for local areas within Swansea are also available with internet response rates by ward ranging from 19.9% (Castle, Uplands) to 10.6% (Bishopston, Penclawdd).

Households and Communal Establishments

The July 2012 Census release also provided local authority level figures for the number of households with at least one usual resident. In the Census, a household is defined as '*one person living alone, or a group of people (not necessarily related) living at the same address who share cooking facilities and share a living room, sitting room or dining area*'.

The initial Census results reported 103,500 households in Swansea, 7.9% of the Welsh total (1.3million), and the second highest figure in Wales (behind only Cardiff). This is some 900 households higher than the previous reported figure for Swansea (the last pre-census estimate, for mid-2010). The 2011 Census estimated that average household size in Swansea (calculated as total residents in households divided by total number of households) was 2.26 persons. However, more detailed data on household structure, including information on household composition (e.g. by numbers of adults and children) was not released at this time.

Of the 239,000 usual residents living in Swansea, the initial Census figures suggest that just over 98% lived in households, with around 4,700 people (2.0%) resident in communal establishments. This was slightly higher than the equivalent proportions for Wales and England & Wales, as outlined in table 2 below.

Table 2: Number of usual residents living in households and communal establishments, 2011 Census

Area	All persons	Household residents	Communal est. res.
Swansea	239,000	234,400 (98.1%)	4,700 (2.0%)
Wales	3,063,500	3,011,200 (98.3%)	52,300 (1.7%)
England & Wales	56,075,900	55,072,600 (98.2%)	1,003,300 (1.8%)

Source: 2011 Census: Number of non-UK short-term residents by sex, ONS. © 2012.

Notes and definitions:

- i. A household resident is a person whose usual place of residence is a household, and not within managed residential accommodation in a communal establishment.
- ii. A communal establishment resident is a person living in managed residential accommodation who has lived, or intends to live there for six months or more. Individuals resident in a communal establishment for less than six months are enumerated at their home address, apart from those with no usual address elsewhere who are also classified as residents.
- iii. Totals (number and percentage) may not sum due to rounding.

Non-UK Short-term Residents

Whilst the main population base for 2011 Census is the usual resident population (see note i. below), local/unitary authority data (rounded) is also available on the number of non-UK short-term residents – defined by ONS as ‘anyone born outside the UK who has stayed or intends to stay in the UK for a period of three months or more but less than 12 months’.

The latest figures suggest that Swansea had 1,000 non-UK short-term residents at census day, the second highest figure in Wales (behind only Cardiff at 3,000). A breakdown of these figures by age is not currently available at local authority level, but the data for Wales suggests that the majority of all non-UK short-term residents are in the younger economically active groups, with over half (approx. 53%) aged 15-24 and a further 33% aged 25-44.

Table 3: 2011 Census: Number of non-UK short-term residents by sex

Area	All (non-UK short term residents)	Males	Females
Swansea	1,000	500	500
Wales	7,200	4,000	3,200
England & Wales	195,100	96,700	98,400

Source: 2011 Census: Number of non-UK short-term residents by sex, ONS. © 2012.

Notes and definitions:

- i. For 2011 Census purposes, a usual resident of the UK is anyone who, on census day, was in the UK and had stayed or intended to stay in the UK for a period of 12 months or more, or had a permanent UK address and was outside the UK and intended to be outside the UK for less than 12 months.
- ii. A non-UK short-term resident is anyone born outside the UK who has stayed or intends to stay in the UK for a period of three months or more but less than 12 months.

Quality Assurance and Comparator Sources

The Quality Assurance (QA) Pack – which was also part of ONS’ 2011 Census first release – provides information on the various comparators used in the quality assurance process. The QA pack is a summary version of the information that was made available to the Quality Assurance Panel during the quality assurance of the census estimates.

The QA Pack provides information on the usually resident population, to local/unitary authority level, by age (five year band) and sex. A summary table produced combines the census population estimates with data obtained from comparator sources including:

- GP Patient Register data (NHS)
- Schools Census data (UK Govt. Dept for Education / Welsh Government)

- Social Security and Revenue – Customer Information System (DWP/HMRC); and
- ONS’ previous mid year estimates ‘rolled forward’ (including recent improvements to migration statistics).

This table also includes confidence interval and response rate information for each five-year age cohort. The table and graph generated by ONS for Swansea is included in Appendix 1 of this briefing note.

The following summary table shows the contribution of the different estimation components towards the final published census estimates for Swansea, Wales and England & Wales. The various adjustment processes added around 18,000 to the initial Census count of Swansea residents (from returned questionnaires), as outlined in table 4 below. Further information is available via the link within the ‘Notes and definitions’ section (see note iv. below).

Table 4: Components of the census estimate of usual residents

Area	Swansea	Wales	E & W
Census Estimate:	239,000	3,063,500	56,075,900
<i>of which:</i>			
Count of usual residents	220,900	2,855,700	52,638,800
Change due to estimation and sample bias	11,400	170,600	2,804,800
Change due to overcount adjustment	-1,800	-23,700	-352,000
Change due to bias adjustment	5,700	38,900	583,000
Change due to national adjustment	2,300	15,900	303,400

Source: 2011 Census QA pack – Swansea. ONS, © 2012.

Notes and definitions:

- Count of usual residents: the original count of usual residents included on questionnaires.
- Change due to estimation and sample bias: undercount identified by the coverage assessment processes, including the Census Coverage Survey (CCS).
- Change due to overcount adjustment: represents the process by which ONS adjusts for duplicate returns at the same location and from different locations, people being counted in the wrong location and erroneous returns.
- Further details of the adjustment processes, are detailed via the link: www.ons.gov.uk/ons/guide-method/census/2011/census-data/2011-census-user-guide/quality-and-methods/index.html

Conclusion

This briefing note summarises the more significant elements of the additional information released by ONS alongside the initial 2011 Census local authority level population estimates in July 2012.

Detailed results from the 2011 Census, including data for local areas (below local/unitary authority level) and further information on local population characteristics, are scheduled for publication in phases beginning later in 2012 and continuing into 2013.

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For further information, please contact: Steve King

City and County of Swansea Research and Information Unit

Tel: 01792 63 5710. E-mail: research@swansea.gov.uk

Performance & Strategic Projects, Room 2.4.2, Civic Centre, Swansea, SA1 3SN.



Appendix 1: 2011 CENSUS QA PACK – POPULATION DISTRIBUTIONS BY AGE, CITY & COUNTY OF SWANSEA

Age	2011 Census Counts ¹	2011 Census Estimates ¹	Lower 95% Confidence Interval	Upper 95% Confidence Interval	Rolled forward estimates ¹	Patient Register 2011 ²	School Census 2011 ^{3,4}	Social Security & Revenue info. 2011 ⁵	Comparator Lower Bound	Comparator Upper Bound	Response Rates
0-4	11,800	13,100	12,600	13,600	13,100	13,400		12,400	11,900	14,000	90%
5-9	11,200	12,400	11,900	13,000	12,100	12,600	12,100	12,000	12,100	12,900	90%
10-14	12,000	13,200	12,700	13,700	12,200	13,200	12,700	12,800	12,700	13,700	91%
15-19	14,600	16,100	15,600	16,500	15,400	15,700			15,300	15,800	91%
20-24	18,100	20,500	19,800	21,300	22,500	21,000			20,300	23,200	88%
25-29	13,400	15,600	14,700	16,400	16,200	17,100			15,700	17,600	86%
30-34	12,300	14,400	13,500	15,200	12,900	15,500			11,600	16,800	86%
35-39	12,900	14,700	13,800	15,600	12,800	15,500			11,500	16,800	88%
40-44	14,700	15,900	15,500	16,400	14,800	17,000			13,700	18,000	92%
45-49	15,500	16,300	15,900	16,700	15,800	17,500			14,900	18,400	95%
50-54	14,500	15,200	14,800	15,500	15,000	16,000			14,600	16,500	96%
55-59	13,200	13,900	13,500	14,200	13,400	14,300			12,900	14,700	95%
60-64	14,700	15,000	14,800	15,200	14,600	15,400			14,200	15,800	98%
65-69	11,800	12,000	11,900	12,200	11,800	12,300		12,100	11,600	12,500	98%
70-74	9,900	10,100	10,000	10,300	10,000	10,400		10,100	9,800	10,500	98%
75-79	8,500	8,600	8,500	8,800	8,600	8,800		8,600	8,400	9,000	98%
80-84	6,100	6,300	6,200	6,300	6,400	6,400		6,300	6,300	6,500	98%
85+	5,600	5,800	5,700	5,800	6,100	6,000		6,000	5,900	6,200	97%
Total	220,900	239,000	234,600	243,400	233,800	248,300	24,800	80,200			92%

Sources: Office for National Statistics¹, National Health Service Information Centre², Department for Education³, Welsh Government⁴, Department for Work and Pensions/HM Revenue and Customs⁵.

Notes:

- i. 2011 Census Count: The number of usual residents for whom individual details were provided on a returned questionnaire, by age group.
- ii. 2011 Census Estimates: The census estimate of usual residents, by age group.
- iii. Confidence intervals: A 95 per cent confidence interval is a range within which the true population would fall 95 times if the sample survey was repeated 100 times. It is a standard way of expressing the statistical accuracy of a survey based estimate.
- iv. Rolled forward population estimates: These are the population estimates which have been rolled forward from 2001 to mid-2010, including recent improvements to migration statistics, and then extrapolated from June 2010 to March 2011. These estimates were used in the quality assurance of census local authority population estimates.
- v. Patient Register 2011: The count of people registered with a GP, extracted from the May 2011 NHS patient register data.
- vi. School Census 2011: Children in state/maintained schools by age and sex, January 2011. Only age groups 5-9 and 10-14 are included as only these groups are fully covered by the School Census.

- vii. Social Security and Revenue information: Includes people who have claimed child benefits, pensions or interacted with the Department for Work and Pensions. This may therefore exclude certain groups who are not eligible for benefits. The data for 65+ will include people claiming a state pension that live abroad. The data refers to census day (27 March 2011).
- viii. Comparator Bounds: The Lower and Upper bounds are based on a diagnostic range calculated using a set method (in ONS Methodology for Quality Assuring the Census Population Estimates paper).
- ix. Data contained within the pack are rounded to the nearest 100, and there may be inconsistencies with comparator data published elsewhere because of rounding, disclosure control and processing to ensure consistency with census definitions.
- x. Further information is available via the ONS 2011 Census web pages at <http://www.ons.gov.uk/ons/guide-method/census/2011/census-data/2011-census-user-guide/quality-and-methods/index.html>.

Figure 1:
2011 Census
QA Pack:
Comparator
Sources –
Population
distributions by
five-year age
group
City & County
of Swansea
Source: Office for
 National Statistics,
 © 2012.

